Mr. James Gates
Premier Refractories, Inc.
816 East Porter St
Crown Point, IN 46307

Re: **089-11254**
First Significant Source Modification to
Part 70 No.: **T089-6882-00075**

Dear Mr. Gates:

Premier Refractories, Inc. was issued a Part 70 Operating Permit (T089-6882-00075) on February 12, 1999 for a refractory manufacturing plant. A letter from Premier Refractories, Inc., requesting changes to this permit was received by IDEM on August 18, 1999. Pursuant to the provisions of 326 IAC 2-7-12, a significant source modification to this permit is hereby approved as described in the attached Technical Support Document.

(a) one (1) modification to the bagging line, identified as EU-004, with a maximum throughput of 6.0 tons of extruded refractory shapes per hour, consisting of one (1) mixer, one (1) hydraulic extruder, and conveyor, all utilizing an existing baghouse (004) for particulate control, and exhausting through one (1) stack (S/V ID: 004). The existing maximum process rate for EU-004 is reduced from 12.0 tons of solids per hour to 6.0 tons per hour of extruded refractory shapes per hour; and

(b) one (1) modification to the ground material line for material unloading at an alternate location, identified as EU-006, with a maximum throughput of 12.0 tons per hour of ground and screened material, consisting of one (1) augur and one (1) existing elevator utilizing a baghouse (006) for particulate control, and exhausting through one (1) stack (S/V ID: 006).

The following construction conditions are applicable to the proposed project:

General Construction Conditions

(a) The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may increase the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

(b) This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

(c) Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

(d) Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

(e) All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

(f) Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

Operation of the equipment listed in this significant source modification cannot commence until the Administrative Amendment No. 089-11412-00075, which will incorporate these limitations into the Part 70 operating permit, has been issued.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter please contact Phillip Ritz, at 973-575-2555 (ext. 3241) or 1-800-451-6027 press 0 and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
PR/EVP
cc: File - Lake County
U.S. EPA, Region V
Lake County Health Department
Air Compliance Section Inspector - Rick Massoels/Ramesh Tejuja
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michelle Boner

PART 70 OPERATING PERMIT
and ENHANCED NEW SOURCE REVIEW
OFFICE OF AIR MANAGEMENT

Premier Refractories, Inc.
816 East Porter Street
Crown Point, Indiana 46307

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T089-6882-00075	
Issued by: Felicia R. George, Assistant Commissioner Office of Air Management	Issuance Date: February 12, 1999

First Significant Source Modification No.: 089-11254-00075	Pages Affected: 4, 5, 27 and 31
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary refractories manufacturing plant.

Responsible Official:	Mr. Ronald Fricke
Source Address:	816 East Porter St, Crown Point, IN 46307
Mailing Address:	816 East Porter St, Crown Point, IN 46307
SIC Code:	3255
County Location:	Lake
County Status:	Nonattainment area for Ozone Attainment area for all other criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(1) One (1) natural gas-fired rotary drum dryer, identified as EU-001, with a maximum throughput of 6.0 tons of dried solids per hour, utilizing a baghouse (001) for particulate control, and exhausting through one (1) stack (S/V ID: 001);

(2) one (1) bagging line, identified as EU-004, with a maximum throughput of 6.0 tons of solids or extruded refractory shapes per hour, consisting of four (4) batching hoppers, one (1) mixer/dryer, one (1) hydraulic extruder and conveyor, all utilizing a baghouse (004) for particulate control, and exhausting through one (1) stack (S/V ID: 004);

(3) one (1) anhydrous tap hole process, identified as EU-005, with a maximum throughput of 6.0 tons of extruded refractory shapes per hour, consisting of a scale, skip, two (2) mixers, and an extruder, all utilizing a baghouse (005) for particulate control, and exhausting through one (1) stack (S/V ID: 005);

(4) one (1) ground material line, identified as EU-006, with a maximum throughput of 12.0 tons per hour of solid raw material or ground and screened material, consisting of a dump station, two (2) bucket elevators, four (4) storage silos which can be filled at a maximum rate of 15.0 tons per hour, a crusher, a dispensing hopper and one (1) augur, identified as EU-006, all utilizing a baghouse (006) for particulate control, and exhausting through one (1) stack (S/V ID: 006).

(5) one (1) large bagging line, identified as EU-008, with a maximum throughput of 12.0 tons of dry solids per hour, consisting of three (3) batching hoppers and one (1) mixer/bagger, all utilizing a baghouse (008) for particulate control, and exhausting inside the building; and

(6) one (1) Eirich high intensity mixer, identified as EU-009, with a maximum throughput of 6.0 tons of dry material per hour, utilizing a baghouse (009) for particulate control, and exhausting inside the building.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(1) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (Safety-Kleen cold cleaner degreaser).

(2) Other categories with emissions below insignificant thresholds:

(a) Two (2) 10,000 gallon tar storage tanks emitting less than one (1) ton per year of a single HAP and less than fifteen (15) pounds per day of VOC; and

(b) one (1) resin taphole process, identified as EU-002, emitting less than 25 lb/day of PM,15 lb/day of VOC, and less than 1 ton of a single HAP per year, utilizing a baghouse (002) with a design grain loading of less 0.03 grains/acf and an air flow rate of 22,000 acfm, and exhausted through one (1) stack (S/V ID: 002);

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - Refractory Manufacturing Operations including the following:

(1) One (1) natural gas-fired rotary drum dryer, identified as EU-001, with a maximum throughput of 6.0 tons of dried solids per hour, utilizing a baghouse (001) for particulate control, and exhausting through one (1) stack (S/V ID: 001);

(2) one (1) bagging line, identified as EU-004, with a maximum throughput of 6.0 tons of solids or extruded refractory shapes per hour, consisting of four (4) batching hoppers, one (1) mixer/dryer one (1) mixer, one (1) hydraulic extruder, and conveyor, all utilizing a baghouse (004) for particulate control, and exhausting through one (1) stack (S/V ID: 004);

(3) one (1) anhydrous tap hole process, identified as EU-005, with a maximum throughput of 6.0 tons of extruded refractory shapes per hour, consisting of a scale, skip, two (2) mixers, and an extruder, all utilizing a baghouse (005) for particulate control, and exhausting through one (1) stack (S/V ID: 005);

(4) one (1) ground material line, identified as EU-006, with a maximum throughput of 12.0 tons per hour of solid raw material or ground and screened material, consisting of a dump station, two (2) bucket elevators, four (4) storage silos which can be filled at a maximum rate of 15.0 tons per hour, a crusher, a dispensing hopper, and one (1) augur, identified as EU-006, all utilizing a baghouse (006) for particulate control, and exhausting through one (1) stack (S/V ID: 006).

(5) one (1) large bagging line, identified as EU-008, with a maximum throughput of 12.0 tons of dry solids per hour, consisting of three (3) batching hoppers and one (1) mixer/bagger, all utilizing a baghouse (008) for particulate control, and exhausting inside the building; and

(6) one (1) Eirich high intensity mixer, identified as EU-009, with a maximum throughput of 6.0 tons of dry material per hour, utilizing a baghouse (009) for particulate control, and exhausting inside the building.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-1-2(a)]

(PM) Pursuant to 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter emissions from the rotary dryer (001), bagger line (004), anhydrous taphole process (005) ground material line (006), large bagging line (008), and Eirich high intensity mixer (009) shall each be limited to 0.03 grain per dry standard cubic foot.

D.1.2 Particulate Matter (PM) [326 IAC 6-1-11.1]

The facilities identified as the bagger line (004), the ground material line (006), and the large bagging line (008) are subject to the following:

(a) The PM10 stack emissions shall not exceed 0.022 grains per dry standard cubic foot (dscf) and 10% opacity.

(b) There shall be a zero percent frequency of visible emission observations from a building enclosing all or a part of the material processing equipment, except from a vent in the building;

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - The following specifically regulated insignificant activities:

(1) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (Safety-Kleen cold cleaner degreaser).

(2) Other categories with emissions below insignificant thresholds:

(a) one (1) resin taphole process, identified as EU-002, emitting less than 25 lb/day of PM,15 lb/day of VOC, and less than 1 ton of a single HAP per year, utilizing a baghouse (002) with a design grain loading of less 0.03 grains/acf and an air flow rate of 22,000 acfm, and exhausted through one (1) stack (S/V ID: 002);

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-5

The Safety-Kleen cold cleaner degreaser shall comply with the following operating and control requirements:

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$)),

or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{O}C) (one hundred twenty degrees Fahrenheit (120^{O}F)):

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for a Significant Source Modification to a Part 70
Operating Permit

Source Name:	**Premier Refractories, Inc.**
Source Location:	**816 East Porter St, Crown Point, IN 46307**
County:	**Lake**
SIC Code:	**3255**
Operation Permit No.:	**T089-6882-00075**
Operation Permit Issuance Date:	**February 12, 1999**
Source Modification No.:	**089-11254-00075**
Permit Reviewer:	**Phillip Ritz/EVP**

On October 28, 1999, the Office of Air Management (OAM) had a notice published in the Gary Post Tribune, Gary, Indiana, and The Times, Munster, Indiana, stating that Premier Refractories, Inc. had applied for a construction permit to construct and operate a modification to a refractory manufacturing plant. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On November 24, 1999, Michael T. Scanlon of Barnes and Thornburg submitted comments on behalf of Premier Refractories, Inc. on the proposed construction permit. The summary of the comments and corresponding responses is as follows:

Comment 1
General construction condition (a): General construction condition (a) requires the permittee to receive IDEM's approval for any changes in construction that may affect the potential to emit, even if that change results in an emission decrease. Premier believes that this condition should be revised to only require IDEM approval if the change will result in an emissions increase. Therefore, the conditions should be revised to replace the work "affect" with "increase".

Response 1
General Construction Conditions located on the First Significant Source Modification Letter, is amended to the following (changes are bolded and crossed out for emphasis):

General Construction Conditions

(a) The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may ~~affect~~ **increase** the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

Comment 2

Sections D.1.1 and D.1.2 at pages 27 and 28 of 36: Premier has included these conditions as a part of its appeal of the Part 70 Permit. Therefore, to the extent this modification purports to impose the requirements of 326 IAC 6-1-2(a) and 326 IAC 6-1-11.1 on the facilities tat are the subject of this modification, Premier states that 326 IAC 6-1-2(a) and 326 IAC 6-1-11.1 do not apply to this source because it is not located in the portions of Lake County in which these regulations apply. For this reason, Section D.1.1 should be revised to incorporate 326 IAC 6-3 and delete references to 326 IAC 6-1-2(a) and Section D.1.2 should be deleted in its entirety.

Response 2
The applicability of 326 IAC 6-1-11.1 specifically refers to the county as a whole. It does not indicate that there are any exceptions to the nonattainment designations. No changes will be made to the permit with regard to this issue.

Comment 3
There are a number of sections in the Part 70 Permit, including without limitation Sections D.1.4, D.1.6, and D.1.8, that are not conditions of the draft modification. However to the extent that they are anticipated to apply when the draft modification becomes part of the Part 70 permit, we object to those conditions for the reasons stated in the above referenced appeal.

Response 3
OAM is aware of the source's appeal. However, this approval is not the proper venue to address the conditions that were not even revised due to this modification.

There have been no changes to the permit as a result of this comment.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Significant Source Modification to a Part 70 Operating Permit

Source Background and Description

Source Name:	**Premier Refractories, Inc.**
Source Location:	**816 East Porter St, Crown Point, IN 46307**
County:	**Lake**
SIC Code:	**3255**
Operation Permit No.:	**T089-6882-00075**
Operation Permit Issuance Date:	**February 12, 1999**
Source Modification No.:	**089-11254-00075**
Permit Reviewer:	**Phillip Ritz/EVP**

The Office of Air Management (OAM) has reviewed a modification application from Premier Refractories, Inc. relating to the construction and operation of a modification to a refractory manufacturing plant.

History

Premier Refractories, Inc. was issued a Part 70 permit (T089-6882-00075) on February 12, 1999. On August 18, 1999, Premier Refractories, Inc. submitted an application to the OAM requesting the replacement of a dust collector and addition of new mixers, extruders, conveyors, and alternate bulk aggregate receiving station to their existing plant. The changes proposed to the Title V are located at the end of this document.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-7-5(16):

(a) one (1) modification to the bagging line, identified as EU-004, with a maximum throughput of 6.0 tons of extruded refractory shapes per hour, consisting of one (1) mixer, one (1) hydraulic extruders, and conveyor, all utilizing an existing baghouse (004) for particulate control, and exhausting through one (1) stack (S/V ID: 004). The existing maximum process rate for EU-004 is reduced from 12.0 tons of solids per hour to 6.0 tons per hour of extruded refractory shapes per hour; and

(b) one (1) modification to the ground material line, identified as EU-006, with a maximum throughput of 12.0 tons per hour of ground and screened material, utilizing a baghouse (006) for particulate control, and exhausting through one (1) stack (S/V ID: 006).

Existing Approvals

The source was issued a Part 70 Operating Permit (T089-6882-00075) on February 12, 1999.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on August 18, 1999.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (Appendix A, page 1)

Potential To Emit Before Controls (Modification)

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Pollutant	Potential To Emit (tons/year)
PM	239.15
PM-10	154.15
SO_2	0.00
VOC	0.00
CO	0.00
NO_x	0.00

Justification for Modification

The Title V permit is being modified through a Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4), any modification with a potential to emit greater than or equal to twenty-five (25) tons per year of PM or PM10 shall be processed in accordance with the requirements for significant source modifications.

Operation of the equipment listed in this significant source modification cannot commence until the Administrative Amendment No. 089-11412-00075 which will incorporate these limitations into the Part 70 operating permit, has been issued.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	severe nonattainment
CO	attainment
Lead	attainment

* Only a portion of Lake County is classified as nonattainment for CO, PM and PM10. The source is located in Crown Point, Indiana which lies outside of the Lake County CO, PM and PM10 nonattainment area.

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for ozone.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	greater than 250
PM-10	greater than 250
SO_2	less than 250
VOC	less than 25
CO	less than 250
NOx	less than 25

(a) This existing source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 25 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, and 40 CFR 52.21, the PSD and Emission Offset requirements do not apply.

(a) These emissions are based upon the Part 70 permit (T089-6882-00075) issued on February 12, 1999.

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
one (1) modification to the bagging line, (EU-004)	16.58	12.16	0.00	0.00	0.00	0.00	0.00
one (1) modification to the ground material line, (EU-006)	11.71	8.59	0.00	0.00	0.00	0.00	0.00
Total Emissions	28.29	20.75	0.00	0.00	0.00	0.00	0.00
PSD/Emission Offset Significant Level	250	250	250	25	250	25	NA

The bagger line (004) and ground material line (006), shall limit PM10 emissions to 0.022 grains/dscf to comply with 326 IAC 6-1-11 (Lake County PM Emissions Control Limitations). This is equivalent to the ton/year emission rates listed above.

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD and Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-2 and 326 IAC 2-3, the PSD and Emission Offset requirements do not apply.

Federal Rule Applicability

(a) This modification is not subject to the New Source Performance Standard 326 IAC 12, 40 CFR 60.670 through 60.676, Subpart OOO, because this modification does not process any of the materials listed as “Non-Metallic Minerals”. Therefore, this NSPS does not apply.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 63 applicable to this modification.

State Rule Applicability - Entire Source

There are no new State Rules applicable on a source-wide basis due to this First Significant Source Modification. All source-wide State Rules cited in Part 70 Operating Permit T089-6882-00075, issued on February 12, 1999, continue to apply to this source.

State Rule Applicability - Individual Facilities

There are no new State Rules applicable on a individual basis due to this First Significant Source Modification. All individual State Rules cited in Part 70 Operating Permit T089-6882-00075, issued on February 12, 1999, continue to apply to this source. The following State Rules cited in Part 70 Operating Permit T089-6882-00075, issued on February 12, 1999, also apply to the modifications to the bagger line (004) and the ground material line (006):

326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations)

Pursuant to 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the modifications to the bagger line (004) and the ground material line (006) shall each be limited to 0.03 grain per dry standard cubic foot.

Pursuant to emissions calculations and information supplied by the applicant, these facilities are in compliance with this rule. The baghouses (004 and 006) shall be in operation at all times

these processes are in operation to comply with this limit.

326 IAC 6-1-11.1 (Particulate Matter (PM))

Pursuant to 326 IAC 6-1-11.1 (Particulate Matter (PM)), the modifications to the facilities identified as the bagger line (004) and the ground material line (006) are subject to the following:

(a) The PM10 stack emissions shall not exceed 0.022 grains per dry standard cubic foot (dscf) and 10% opacity.

(b) There shall be a zero percent frequency of visible emission observations from a building enclosing all or a part of the material processing equipment, except from a vent in the building;

(c) The PM10 emissions from building vents shall not exceed 0.022 grains per dscf and 10% opacity.

Based on emissions calculations and information provided by the applicant, these facilities are in compliance with this rule.

Compliance Requirements

Permits issued under 326 IAC 2-7are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The Bagger Line (004) and the Ground Material Line (006) has applicable compliance monitoring conditions as specified below:

   (a) Daily visible emission notations of the bagger line (004) and ground material line (006) stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal

emission is observed.

(b) The Permittee shall record the total static pressure drop across the baghouse(s) used in conjunction with the facilities listed below at least once daily when the processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across each baghouse shall be maintained within the range specified below or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

Facility	Pressure Drop
Bagger Line 004	3.5-11.0 inches of water
Ground Material Line 006	1.0 - 6.0 inches of water

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

(c) An inspection shall be performed each calender quarter of all bags controlling the refractories manufacturing operations listed in this section when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

(d) In the event that bag failure has been observed the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouse for the Bagger Line (004) and the Ground Material Line (006) must operate properly to ensure compliance with 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations) and 326 IAC 2-7 (Part 70).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

None of the listed air toxics will be emitted from this modification.

Changes Proposed

The following changes have been made to the Part 70 Operating Permit (T089-6882-00075):

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(1) One (1) natural gas-fired rotary drum dryer, identified as EU-001, with a maximum throughput of 6.0 tons of dried solids per hour, utilizing a baghouse (001) for particulate control, and exhausting through one (1) stack (S/V ID: 001);

(2) one (1) bagging line, identified as EU-004, with a maximum throughput of ~~12.0~~ **6.0** tons of solids **or extruded refractory shapes** per hour, consisting of four (4) batching hoppers ~~and~~ one (1) mixer/dryer, **one (1) hydraulic extruder and conveyor**, all utilizing a baghouse (004) for particulate control, and exhausting through one (1) stack (S/V ID: 004);

(3) one (1) anhydrous tap hole process, identified as EU-005, with a maximum throughput of 6.0 tons of extruded refractory shapes per hour, consisting of a scale, skip, two (2) mixers, and an extruder, all utilizing a baghouse (005) for particulate control, and exhausting through one (1) stack (S/V ID: 005);

(4) one (1) ground material line, identified as EU-006, with a maximum throughput of 12.0 tons per hour of solid raw material **or ground and screened material**, consisting of a dump station, two (2) bucket elevators, four (4) storage silos which can be filled at a maximum rate of 15.0 tons per hour, a crusher, ~~and~~ a dispensing hopper **and one (1) augur**, all utilizing a baghouse (006) for particulate control, and exhausting through one (1) stack (S/V ID: 006).

(5) one (1) large bagging line, identified as EU-008, with a maximum throughput of 12.0 tons of dry solids per hour, consisting of three (3) batching hoppers and one (1) mixer/bagger, all utilizing a baghouse (008) for particulate control, and exhausting inside the building; and

(6) one (1) Eirich high intensity mixer, identified as EU-009, with a maximum throughput of 6.0 tons of dry material per hour, utilizing a baghouse (009) for particulate control, and exhausting inside the building.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(1) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (Safety-Kleen cold cleaner degreaser).

(2) Other categories with emissions below insignificant thresholds:

(a) Two (2) 10,000 gallon tar storage tanks emitting less than one (1) ton per year of a single HAP and less than fifteen (15) pounds per day of VOC; and

(b) one (1) resin taphole process, identified as EU-002, emitting less than 25 lb/day

of PM,15 lb/day of VOC, and less than 1 ton of a single HAP per year, utilizing a baghouse (002) with a design grain loading of less 0.03 grains/acf and an air flow rate of ~~2,224~~ **22,000** acfm, and exhausted through one (1) stack (S/V ID: 002);

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - Refractory Manufacturing Operations including the following:

(1) One (1) natural gas-fired rotary drum dryer, identified as EU-001, with a maximum throughput of 6.0 tons of dried solids per hour, utilizing a baghouse (001) for particulate control, and exhausting through one (1) stack (S/V ID: 001);

(2) one (1) bagging line, identified as EU-004, with a maximum throughput of ~~12.0~~ **6.0** tons of solids **or extruded refractory shapes** per hour, consisting of four (4) batching hoppers ~~and~~ one (1) mixer/dryer, **one (1) hydraulic extruder and conveyor**, all utilizing a baghouse (004) for particulate control, and exhausting through one (1) stack (S/V ID: 004);

(3) one (1) anhydrous tap hole process, identified as EU-005, with a maximum throughput of 6.0 tons of extruded refractory shapes per hour, consisting of a scale, skip, two (2) mixers, and an extruder, all utilizing a baghouse (005) for particulate control, and exhausting through one (1) stack (S/V ID: 005);

(4) one (1) ground material line, identified as EU-006, with a maximum throughput of 12.0 tons per hour of solid raw material **or ground and screened material**, consisting of a dump station, two (2) bucket elevators, four (4) storage silos which can be filled at a maximum rate of 15.0 tons per hour, a crusher, ~~and~~ a dispensing hopper **and one (1) augur**, all utilizing a baghouse (006) for particulate control, and exhausting through one (1) stack (S/V ID: 006).

(5) one (1) large bagging line, identified as EU-008, with a maximum throughput of 12.0 tons of dry solids per hour, consisting of three (3) batching hoppers and one (1) mixer/bagger, all utilizing a baghouse (008) for particulate control, and exhausting inside the building; and

(6) one (1) Eirich high intensity mixer, identified as EU-009, with a maximum throughput of 6.0 tons of dry material per hour, utilizing a baghouse (009) for particulate control, and exhausting inside the building.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-1-2(a)]

(PM) Pursuant to 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter emissions from the rotary dryer (001), bagger line (004), anhydrous taphole process (005) ground material line (006), large bagging line (008), and Eirich high intensity mixer (009) shall each be limited to 0.03 grain per dry standard cubic foot. ~~This is equivalent to the following pounds per hour emission rates:~~

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - The following specifically regulated insignificant activities:

(1) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (Safety-Kleen cold cleaner degreaser).

(2) Other categories with emissions below insignificant thresholds:

(a) one (1) resin taphole process, identified as EU-002, emitting less than 25 lb/day of PM,15 lb/day of VOC, and less than 1 ton of a single HAP per year, utilizing a baghouse (002) with a design grain loading of less 0.03 grains/acf and an air flow rate of ~~2,224~~**22,000** acfm, and exhausted through one (1) stack (S/V ID: 002);

Conclusion

The operation of this replacement of a dust collector and addition of new mixers, extruders, conveyors, and alternate bulk aggregate receiving station to their existing plant shall be subject to the conditions of the attached proposed **Significant Source Modification No. 089-11254-00075**.

Appendix A: Particulate Matter Emissions

Company Name: Premier Refractories, Inc.
Address City IN Zip: 816 East Porter Street, Crown Point, Indiana 46307
Significant Source Modification: 089-11254-00075
Reviewer: PR/EVP
Date: August 18,1999

ID	Process	Process Rate (tons per hour)	PM Emission Factor (uncontrolled) [see note 1]	PM-10 Emission Factor (Uncontrolled)	Potential PM Emissions (Uncontrolled)	Potential PM-10 Emissions (Uncontrolled)	Control Efficiency [see note 2]	Potential PM Emissions (Controlled)	Potential PM-10 Emissions (Controlled)
004	Taphole	6	0.5	0.5	13.14	13.14	0.99	0.13	0.13
006	Ground Material Line	12	4.3	2.7	226.01	141.01	0.99	2.26	1.42
				Totals	**239.15**	**154.15**		**2.39**	**1.55**